IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventors:	**Yang et al.**
Serial No.:	**Not yet assigned.**
Filing Date:	**Herewith**
Examiner:	**Not yet assigned.**
Group Art Unit:	**Not yet assigned.**
Title:	**COMPOSITIONS AND METHODS OF DIAGNOSING, MONITORING, STAGING, IMAGING AND TREATING COLON CANCER**

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By _____
Jane Massey Licata, Registration No. 32,250

BOX SEQUENCE
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE WITH 37 C.F.R. §§ 1.821 THROUGH 1.825

(XX) I hereby state, in accordance with the requirements of **37 C.F.R. § 1.821(f)**, that the contents of the paper and computer readable copies of the Sequence Listing, submitted in accordance with **37 CFR § 1.821(c)** and **(e)**, respectively are the same.

( ) I hereby state that the submission filed in accordance with **37 CFR § 1.821(g)** does not include new matter.

( ) I hereby state that the submission filed in accordance with **37 CFR § 1.821(h)** does not include new matter or go beyond the disclosure in the international application as filed.

( ) I hereby state that the amendments, made in accordance with **37 CFR § 1.825(a)**, included in the substitute sheet(s) of the Sequence Listing were made merely to conform with the current Sequence Listing rules. I hereby state that the substitute sheet(s) of the Sequence Listing does not include new matter.

( ) I hereby state that the substitute copy of the computer readable form, submitted in accordance with **37 CFR § 1.825(b)**, is the same as the amended Sequence Listing.

( ) I hereby state that the substitute copy of the computer readable form, submitted in accordance with **37 CFR § 1.825(d)**, contains identical data to that originally filed.

Respectfully submitted,

Jane massey licata

JANE MASSEY LICATA
Registration No. 32,250

Date: March 26, 2001

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SEQUENCE LISTING

<110> Yang, Fei
Piderit, Alejandra
Hu, Ping
Recipon, Herve
Macina, Roberto

<120> COMPOSITIONS AND METHODS OF DIAGNOSING, MONITORING, STAGING, IMAGING AND TREATING COLON CANCER

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actctgacaa cactgactct cttgacttca gaactttata cctaatagtt ttggacttgg 60
agaagagagt gaatttaact ccagattaaa gtcacttcta ttacagggaa atggccattt 120
taatcactga aatgagactt tatgatagag ttacctgaag attcatgtaa cttgtttcaa 180
atttcatcct agtgaggaat tagacctaga aaaaaatgga gagttacctg aagattcatg 240
taacttattt caaatttcat cctagtgagg aattagaccc agaaaaaaat ttaaggtata 300
gtggaaaaat acgaaaatca ccttttcatt acattccaca gtatacttgc ctagggtaaa 360
tgtttagacc cttcagagtc ctgctgtttc taagttgttg cctctgattt acttagccaa 420
actcaactcc aagggttttc tgaatcctca aagaaaaatt atgtacctgc ccgggggggcg 480
ctcgaaagcc gaatccagca cacgggggggc gggctagtgg gtccggctcg g 531

<210> 28
<211> 386
<212> DNA
<213> Homo sapiens

<400> 28
ggtacactgg cgactcagct gaaattttct ttatggtagc tctttcatta tggactgagt 60
ggtctttaat taagctctga atctgatcaa gtcacacttt ttttttaaga cacaaacttc 120
aagtggagaa aatctccttg catttatttt attcttgttc aaggattcaa gtgggcatga 180
ttttctgtaa tcccacacag cccttcatag ctaaaagtta atatttccaa ctggttgctt 240
tgagattcca tacatatggc ttaggaatga agtcatccac tatttccata ttgagaaata 300
aattatggac accatctcta gaattcagtt tctttaaata agctgaagat ttgttctctt 360
tttctccact atgtttctat gctagt 386

<210> 29
<211> 696
<212> DNA
<213> Homo sapiens

<400> 29
accacaacct tgcaaagtat cttcagattg attttataga tgaggaatta gaggcttaga 60
gattaattca tccagttcat atccagtgca cagtttaatc ctgcactttt tctgctgagt 120
aatattgctt gttctaaatg gcactcttga gtcaatgtgt tcacctcgct taggagagca 180
gcttatttat tgttataaat atgcttatct gaaagtaaat ttatttttgc aatgccccat 240
ccgtagtcat tgaaagatat aaataataag gtgatatggc atttttgagt tttgatatag 300
tctgctaaaa gggacttagt cgtcttatag tttcttgtta gtaggattgg atcagcaatt 360
atttactgtt taagttttca aacatgtttc ttgccctcaa gtcctataac caaatttaaa 420
tggcatttgt tttggtaatc aataactctt tatcataatt tatatttaca gtgttgattc 480
tgttgaacag gtatagacag taatgtttac attctacttg attaagttaa taatgtgtaa 540
ttgtttctat aaatttttaa gtatttcatt tgtggaaatt tgagttgctt tcgagttttc 600

tagtgtagtt tattgatagt atatgaaatt gctagcaaat caatgacttt aacaaatttt 660
tgttgttaat ccttttttcc cccttcgtct gtaggt 696

<210> 30
<211> 554
<212> DNA
<213> Homo sapiens

<400> 30
actaaataaa aattctagta aatattgaat tatattattc tttcagcaaa aaaatagtat 60
tttattatct ctacaaaatg tagaggggag tattctaggt aactgaatgt ttcttagcct 120
aacttcttgc ttgaagaagg ccttgaaaca aagacttgca tacagatagc ttattttagc 180
aagtgatatc ctaaggaaca gtagcaagag acttgggagt gttaaacaga gaagattaaa 240
agccaattta agagtatgct gttgagctgc ttaattatgt aggcaactgc tcataaatct 300
tattgactac tcttggggtg ccttgtagaa cgcaccttca acttgagccc ttgaaacaag 360
gaaggcatga caatatgccc gcagactctt tttataattg gtgaagaatt ttcttaggtt 420
ttcttaacca cttgtgattt caggtttgtg atcaaaccag aatgactgag cggactcctg 480
ttagagtctt atgttctcag agaaatactg ggggagaaat ccagaggtaa gtatctcagc 540
caaggtggag tggt 554

<210> 31
<211> 589
<212> DNA
<213> Homo sapiens

<400> 31
cccgcccgtg tgatggatat ccgcagaatt cggctttcga gcgccccccc ggccaggtct 60
cagagccttg gactctgaga tatcaatggt catcacataa agattagaag cccatatctt 120
ttctttttt taaaagatat tgtttatgta ttttatatcc tgatggaaac ctgggagaca 180
ggagacccat ataatgtccg agattgaata ttctgccagc ctggttggat ggagtagaga 240
atcagaatta aattgaattt aaaaaagaca agggaagtta tgtttcttat agtttttagt 300
ttatgcattt cacatgatgt gaatcttctt cctcagcatc ccactcttct gaccagaaat 360
caggttactt tttagattct caataactct ccaaagctcc taaccaccat gaattttggg 420
cataaacttt tctgccttct tgtagggagt atgaaaatgt tatctgtggc atcccccgat 480
ccatggggac ccaagcccca tttcattagg aatgattcac acttctcaaa ggcaaagtgc 540
tcaaagcata taaagtcttc ttggcctaac accttatgtt tctgtgggt 589

<210> 32
<211> 675
<212> DNA
<213> Homo sapiens

<400> 32
acaagctttt ttttttttt ttttttttc ctatcctccc ggctttttt ttgggccccg 60
gggggggacc ttccccacaa aggaaaaaaa agttatttaa aaaaaccggt ttccggggaa 120

accctgtctg gtggtcccct ctggggtgcc ccccctgtta tatgccaacc ccagaagcca 180
gcaggaaaga ggaatcccca aagccccata agagagtggg gcccacaagg gaagataagg 240
aagcctctta atgaaatttc caggaagttg tctctgggaa gaggggtgcc tctggttaag 300
cgaaaaaacc cgggggggtg aaaaaacttg ccatgtgggc ccaaagagcc accagggtcc 360
cactgggcgg gaaaacacgg tggggtctcc acaggggggg gttatattcc tgcccagggg 420
ccctcgaacc tcattttggc ccgcggaaga ggtaatccgg gcgattccgc acaggggatc 480
tcgccgggag gggccgcaca aaaggcggat ttcaacgcca catgggggggg gccgacaata 540
ggggacccga gttggtaccc acgttggggg gtaccatggg ccaaaggtgg cccgggggga 600
aattggtttc cggccaatcc ccacatatca ccaacaaaag atgataaaaa agaaagacca 660
aaacaaaaga gacga 675

<210> 33
<211> 582
<212> DNA
<213> Homo sapiens

<400> 33
acttacctcc aattttcaca gatgatcatg cgccattttg tcggatacag agagctacac 60
tgaaaacaag caaatgaaca atgaaaagaa ctcattatct gtaaaagtaa gattactttt 120
agatctggtc tagaatctaa gctactctgg ctaagctatt ctttcagaca aaaccattct 180
cagctcccaa taataccata taaatgaatt tagggagcat agtgaatatg tagattagga 240
attgtatgta ttttctccat tcataaaaac acgttttgaa tctaaaactc aaatgcttat 300
ttttaaagtt aaaattaaat aggaagtcgg ttttctggtt cattatagtc ccacttatcc 360
tgcaaatatg cagttagcac tctgatcaag aattctaaaa atttatttt atcaactccc 420
tagacaaagc aaacctaggt tatcccaaca cacataatat gtgtgatcct tacctctctt 480
agaaaaaaat acaatatgca atttgcagct tttcactcaa gggaaaaatg agtatgtgaa 540
caacatgaat atcataatat ttttaaaata ctcaacctaa gt 582

<210> 34
<211> 558
<212> DNA
<213> Homo sapiens

<400> 34
actacataga gtttctgcat taaatatcaa tgatcacaaa gggtatactt tttaaacacg 60
catttttcaa aggactgctt tcgctttcaa tttgaggttt attctcacct gaatatcttt 120
attctgaaac tgaacaaaac ctggaggaac cagactcctt agattaaatg tcattttgtt 180
taaaaaagca acattcacta aataatcaga tctcctattt tcttggcatc agagggaata 240
aatgccaggt gtaaacctaa gccagaagca aaaagtgtta aataaaaagt tcaaatatgt 300
tgctttcata aaggcaaaat ccaaatacct ttatcttttg aaatttcaat tttcggaaac 360
aatataaact gctgaagtaa ttataaacct attattcttt aatacaacaa ctagaactta 420
aaacagaatt gagaagtaat ttgaatggac tatggaatgg atactgtaaa tactatattt 480
tgaatatctg atatttcata taaaaagaaa aaaatggaaa aaatttacaa acaattattc 540
caaaatgtct attatatt 558

<210> 35
<211> 567
<212> DNA
<213> Homo sapiens

<400> 35
acagcaaaag cccaggctcc accacgacac aatatatgca cgcaggaaat ctgtatttgc 60
acccccctaaa tatttaaaat atttttaaaa ataattaaag aaaaaataag atggaatcaa 120
aatcataaca aagataaaaa ttatattaag ctctatgatg ttcattaaga acaataccta 180
aacataaaaa tgtagaattc tggaagatag gatgttaaac agtgattaga agacaaatat 240
ttagcagaaa aaaaagctga tgtagttaca tagatatcag gcaaaagagg agataataaa 300
ggtaactgct acatgaataa aatagaccaa aagaaacaat aaaattgatc aaagaaactt 360
agagttaatt ctttgaaaaa aacgaataaa atggaatacc aagtttttct ttgacagaac 420
tcaaatacaa tcctgaggga agaaaacaag tgtataatga tacagactgt ttcatatcat 480
ttctatacat tttaactcag aaaacaatat tgcatattgc tcatggacct attaagtatt 540
taaaattata caaatggctg aaaggtc 567

<210> 36
<211> 583
<212> DNA
<213> Homo sapiens

<400> 36
gcgcccccag ttgtggatat cccaaattcg gtttcgacgc ccccccggca gtacaggcag 60
actagagccc aagttttctc attcttactg gtcaagtgga agcagtgaca tcttttgccc 120
aaagcagtaa aataaccttt tatttttccc ccaaacaaat gctgccatat cccctaaata 180
gagaaacatc tatgtgagcc taacacacac atagcattgg caacatcttc aaaagtctag 240
gtgtggattt taatatgatg aagttgagtt ttacagttca cacaattcca ggtttcatag 300
tgataagaaa tgtggatcag aattgtgcct gctgtgtgaa ggtgatggca atcaggtcag 360
ccatccaagc aggatacact tgacagacag agctcccatg caggtccccc aaatccaagc 420
aacatgtggc tcagagttgc caaagactgt gctttccttt cctggccctt caatgataca 480
tctccccaat gccttctctg catattttct ctctcaaatt cacggaggtt ctcattagga 540
gagcagaaag gcctttcttc tagcactact cacttcccaa tga 583

<210> 37
<211> 521
<212> DNA
<213> Homo sapiens

<400> 37
actatttgac ttcctccttt atgtccgtgc ctttcctata aattgaaatt tgagttcaga 60
ggcttaactc agattaaact ttttggcaaa aagactacat aagtagtgct gtgtgcttca 120
ttttgccaaa tttcccttca caggggttat acctgagaat gatgttaagc tttgagtttt 180
atggtgcagt tctaattgac atttatttaa ttttagtgat gttaagcagc ctttcatatg 240
cttaagagcc atttctgttt aagggctatt aagcatatga aaggctgctt aacatcacta 300
aaaaaaaaaa aaaaaaaaaa aaaaaagggt gtggtcaaaa ttttgttctc tcgctgtacg 360

gggaaaaaac aaagaaaggg ttgaccgcgc cgggggggcc gcataaagcg cgaatcccag 420
cacggggggc gcggaaaaag ggggccccaa gcggataacc agcgggaggg agacagtagc 480
aaaggctgac cgtggggaaa atggtaccgg ctaaattcgc g 521

<210> 38
<211> 322
<212> DNA
<213> Homo sapiens

<400> 38
acaagctttt ttttttttt ttttttttg gcccaaaagg gggtaagggg ggtgctatgg 60
ggtaatttaa agttggaaca taaaattcta ttcttgggac aaccaagtta tcaccagggc 120
tcaattaccg tgccgcgggg ggcgcgttcg aaaagccgaa tttccagaca cagcgggggg 180
ccgttaactt agtgtggatc acgagcctcg gttcaccaag cttgtggcgt taattcatgt 240
ggttcattag cgtgattccc gttggtttga aatttgttta ctccgcttca tcaattctcc 300
accacacctt tacagacaca at 322

<210> 39
<211> 306
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (220)

<400> 39
acatatgtgg tttatcaaca ttgtataagc cattggccta aggactaaaa gcatgttaaa 60
aagaatgggg tcccttatat taagtggtta ataattgctt gttaacaatt ttaactctag 120
aataaatttc tctctctgaa gggccctgaa tctttatgtg aatattgcct atttatcaca 180
ttgtggagcc aagtgaacat taaaaaacta caataaacan cgtttaaagg aacaaaattc 240
tttcatagcg atacagacgc atacttttt tgaaatcaag aaaccacttc atcactctct 300
cccata 306

<210> 40
<211> 487
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (160)

<400> 40
cggccgaggt acaagtccag gcagacttga aacaggctcc attctgagaa gccaattaat 60

agagagcttt tactgtttgt agacacagaa gagagatggt gtttcccatt ttatgtggtt 120
aagactaata gtaatactcc ttgtcatact catactaaan tgtaatttta aaagaaccat 180
gattgagaaa gcagtcctag atattcagca atttcttagc taatttaata tttgtgtata 240
aacattttgt aaactagaaa tgtaaatatt tttaactttt aaatgggatt tactcctatg 300
tttttactta tttttaaaac tataggatga ttcctttgat aatttatatt taatttttc 360
ttaaatatac caccaacatc aaagtatttg tttccaactt attttatagt atgtttctaa 420
ttttcagaga gagaaatata cattctcatt ttgtcttcct ataaacaata ccatgaattt 480
gctctgt 487

<210> 41
<211> 402
<212> DNA
<213> Homo sapiens

<400> 41
gcaggtactc agttaacttt tgaaaataaa ctcatttgtg ttgctgagcc aaagattgta 60
ttgcatgaat atgtcacagg catcaggtga atatttcaca gagatccaaa tgccctctta 120
taatgtaata ccatgccaaa gaccccagag ttttttttt tttaaatata ctttcaaact 180
gcaaaggaat tgagtttatt atattaatag taatgcatat tgttatggta tttgaagtaa 240
tagccttccc aagtgaatag ttgctgtatt atattctaat ttttgtttgt ttgtttgttt 300
taacgggaat gtctagtaaa tcaaagacca tttgttttcc atttctctga attttcagtg 360
tcaggatatg taacatcatt cgtatctggc acacctctat gt 402

<210> 42
<211> 222
<212> DNA
<213> Homo sapiens

<400> 42
acaagatgaa ctttagccaa gcaagagatg actaataaaa acttagcaaa aagatttatg 60
attaatacct tcagaaagtt ttataattaa acagtaaaat actctggtgg aagaaacatc 120
tgtgaataaa tgagaattag ctgatattct tctgttttat gcctttgcat ataataagag 180
tggggagcaa gtacctgccc gggcggccgc tcgaagccga at 222

<210> 43
<211> 244
<212> DNA
<213> Homo sapiens

<400> 43
gcaggtacat ttgagaatga acctaattta ttaatgcaat ttcattagcc caacaaaata 60
taagagtgtc taagcccact atttttcttc tggtgccttc ctggcaagca ttactgagtt 120
ataccaggta gtatttgcca ctataacgaa ctataaattg ataccaggac acaggcgaag 180
aaaaccgtgc ccaataactc ttcctttctt gagaaaaaca gtgagtctct gccatttgaa 240
gagt 244

<210> 44
<211> 603
<212> DNA
<213> Homo sapiens

<400> 44
acagaagatt acaaaatatt tgtcccttcc aatcctcagt caaatttgaa gttcaacatc 60
atatgaagca attctgcatt ttaagcttct cagatgtttt catagctgga gcaaacttag 120
aaatactaaa taactttggg cagactcttc atttccttac catgccagac ccaagcgaac 180
tactcactgt aacatcagag tagaggttat tggaggatat cacttagagg tgtccaaaat 240
ctcccgtttt gtttaataat agtctgttaa tctcttaatc atctaaacca ttgcttctca 300
aaagaagatg ttggcatttg gtggtgacac tttttggtcg ttagaggctg tctagtgcat 360
agcaggacat ttaacatccc tgaactccag acactaaatg ccaggggcag ccccatccat 420
gtgatggaaa atctattccc acacatttcc aaatgcccct caagggttgg caccactact 480
tgattaggag ccactgtggt ggaacctttg aaattgattt ctgtttatgg tgaaggggcc 540
tagataggac agccttaggg tttaaaccca gaactacttt ctaagaggga gacttaggcg 600
cgc 603

<210> 45
<211> 428
<212> DNA
<213> Homo sapiens

<400> 45
acatatatta cgtttttcac aactgacata actttttac ttcaagtgaa gtcttgaaac 60
tttgctttca tttaggtccc atgatctttt acatttctta aatatttaaa tatcttcaaa 120
tatttaagtc ttaagtattt tattcataca tatggagcat tatatcaaac ttgatatttt 180
taaactgaca gatatgattt aaaaggttca tgaggtctat tatatttgtt ctacgtttac 240
catttttttt ggtttttggt ggttttattt tcctttatga aatttaaagc gtgctaatag 300
catagcttat ctgtttggaa agtttccttt aattatgctt taaggcgaga tctactgata 360
acatattctc ttatttttc ttggtataag aaggtgttta ttttccttta attcctgaag 420
gatagttt 428

<210> 46
<211> 558
<212> DNA
<213> Homo sapiens

<400> 46
acctcttttg gaagaagttt accaaccact actctaacat gacagtaatc aaggtagtgg 60
tgctggaaaa agagacaagt agagcaatgg agccaactag aatctggaaa tagacccata 120
cctaatatat tttatatttt tgaaaaagac accaaagcaa tacaatgaga aaaggtcaat 180
ctttgtaaac aaataatgtt ggaaaatcag ttatccaaat agaaaaaatg attttctacc 240
tcaaatccat acatagaaat taattcaaac ttcttgaagg agccacagga gaacgtctcc 300

agaaccttca gatagtgaca gatttttga ctaggacgta gaaattagtc gggtaagaaa 360
acattgatga attgaacttt gtaagaattt taaagctctg ttcatcaaaa tgcccaaatt 420
aaaggacatt ctgaaaatac ctaagtggaa ctctgaaaaa ttgtcatgaa agacaaggga 480
aacctgagaa actgtcatac aatgggaggg aaatgggagt catgacaaac aaatgtaatg 540
tagtatcctg gatagggt 558

<210> 47
<211> 453
<212> DNA
<213> Homo sapiens

<400> 47
tcctgaaatg cacacccccc ttcttttggg aacacttgcg atcatattgc ccgccctgga 60
ggggccgaat gcgtatttat attggttgtg gattttcgag aaagaatttg ggataggact 120
taagtcacgg tgaaggaatt tcagtgtagt ggcactttga atggtgtata aagagataaa 180
tgaagttaat gggccaaagg ggaccacccc ctctgccaca ccttgtgaag gtggcaccca 240
tttctccggc tttaatgacc tgagagcttc cccgttttga gtgtagcctg aggaatatct 300
gtggcagatg aggtcagaga tggcaacagg gatgagatcc cttatggccc cgtagacccc 360
ctcacataga attttagact ttatcctacg tgttaatcag atctttttaa gagttttaaa 420
aacggggata aaaccaaaaa aaaaaaagct tgt 453

<210> 48
<211> 546
<212> DNA
<213> Homo sapiens

<400> 48
tattcatggc cttgatgtct cttaagatga aagatgtaat tttttcatgt gtcttccatt 60
tgattaccgt attactgttg tcagctttgg tattccctgg tggttgtgtg ggaaaagggt 120
ataactcttc tatcttaaga gaagagattt ttttctctat ttgaggttgt atgttttaaa 180
gctataattt taataagatc actagttgta ttttggcatg atgacatgtt acatgcaaat 240
gtttgaatgg gtgaaaactg aacatgtttt tgccacctag gcttttcaag ttctacagaa 300
ctagaaatgc ggtatgcccc ataggcatct gttttacctg gttcccatag gctttctgag 360
ccaatattat ttgtaatatc tttacatata actcttgcat aaaaaagtct ggttgggttt 420
tatccagata aaatacatac tacttcttga atattgccct aaagttatcc ttaggttatt 480
caacctcttc cataaactag tatttttttat ccggagaaaa tgcgggggggc ggggagccct 540
ataaac 546

<210> 49
<211> 888
<212> DNA
<213> Homo sapiens

<400> 49
gttttatatt gctagggttc tggttgtgat gtattaggca attattatga aacaattggt 60

gtatatatat aggaataggt ttcaaaatca tatgaagttt gcgattcaga caaacttttg 120
ggggcctcag agatttttgt tattcaaact acaggtagtg gaagtctact aaatttacag 180
acttttattc attaaaatat cagaatcagg aattagcttg atccccttat aaaatgtgga 240
ttcttgtgtc tatgccaaca agcataaggt agcaaactag ttgatagtta tatcaggaat 300
ctgcagagaa aaaaatacta tttagaacaa tatggttata gatatacata aaagaaaaat 360
ggaattgaag agaaacaaaa gtgatttgaa gtaacttttg aagtcaccca atatttgttg 420
gtaatcatga tcaaatgcct gcatctcatt gatgagaatt caatatgatt cagttatcta 480
catatgtgta ataagggata ccatgaaact tgaatggagg attgatattc caccttggtt 540
tgtattcatg tttcacacta agtaaagctg aagataataa ccttttgata tcatcagaag 600
tgataattta attcacatct gagcataaaa ttagggaaat gttatttctc ttttttgtgg 660
tagcattctt tgttttctca ggcaaagcag ttccagaaac aggtgtgaag ataaatagat 720
ttcaataagg aacctaaagt tgagaagaaa aaaagagctc aaacaacgtt caataactat 780
tcccatgcat tattccttta gacaacagct gttagagaaa gagatccatt atacatgtaa 840
atgatgttaa atgtaaaaat atggagacac aaagatgata aggaatgt 888

<210> 50
<211> 772
<212> DNA
<213> Homo sapiens

<400> 50
agttgattaa ctaggatttt ttttaaaata aagaagttac agtaaatatt ttagaaagca 60
aaacaagagg cagacacatg gaacatttct gtctggacca gagtaagatt cagaatccag 120
agcatagctc agaaagccaa ttttcttact ggattttacc acagaacagc tgcactgttg 180
tagcagatct gggactaatg aatgagagct atctgggtat cgcttttcct tggtaagatt 240
ggtatatttg tattctgctc ttatcaaggg cagagtgtcc tggctaataa agattgtctc 300
tggtatcgaa tgagtaccta gaataatctc taagaacctc cagtgagtta ctgaccacgc 360
acaccggcac acagtcttct ataggcgaaa gctcctctcc cctcattaca catattcatg 420
caaaacattc gcccatatca attttgctga ccttttttatg cactctatta tgtaactccc 480
ataagataca atcttttcac ttaagggacc atttaaccac cttaggccca aaaaaaaaaa 540
agcacaaggt aagatatctg tgtgtgaaag agacattaaa atatcaactt caaacagcat 600
gggggagaaa acagtatgtc tcccatttct tttccaaaac aaaggaagta agaaattctt 660
tcatggtttt tgtttgtttt tcaaatcaca ctgtcctcaa cttttaaaat aataatcttc 720
cttgacagtc atttaataac ttgtgagtga tctatgactc ttattataaa gt 772

<210> 51
<211> 508
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (217)

<400> 51
tgtacaagct ttttttttttt ttttttttttt ggggaagggt ggaaggccct tggggttttg 60

gggctcagtg tcgcgtgggt tcaaaaataa aaactagttt ggagaaaatg aattgcaagg 120
gaaaaaaatt tatttcccaa agttccggtg tgaaaagtgg tctcccattt tggggctttt 180
gaggaggggg ttccagtgtg gggttggtct gatctgntaa cccggggtgg gggggaaaag 240
gtgggttggg gtggggagag ggaagtctcg agggtgggga aagtgggagg gaagtttaac 300
gaggaaagca aaacggggcc caagcgtctc aaacccgaaa ttcccggggc tcgggggccc 360
accagggttc cagggggggg ccccttтcgt tgggtgggga cacttcgcgg tggcctcctt 420
ttcaggaccc aggcgggccg ggaacctttt taggctcgtg tggaaggttg caccccacgg 480
ttccccctttt tccccccggg gtgctcgg 508

<210> 52
<211> 558
<212> DNA
<213> Homo sapiens

<400> 52
actgtaaaca cttatacagt cttataaatg tcatggaatt ttactaaaga ggactaaatt 60
ctctagaaat tcattgtgga tgtgggccag cagcagttgc aatttggctc atagttttta 120
tcagaccagg ttccccagaa gcagattcta agaagaggat tcttttgcta gtgatgtagt 180
aaaattgtat ttccagaaga tggctaagaa tggagatgga gggatgatgg aattcgaaga 240
aacatatgat agagaggaag caaacaaacg gtgctactgc agacaatgtc ccagaagggt 300
gatatcagcc tgctaccaca gaactctggc atatgaatca tgagcttggt tgtcataatc 360
tcataagttc agtaattggc taagggcaat tgagcagagc aacagtgtgt gctacttagc 420
aaaggaaaat aattcttctg tctttctcgg tgtctttatt tcagatgctt gtcagaacta 480
ttctgaacaa catagaacag agacaagatt tggaatcaaa taacttatca aaagatcagg 540
cacggtgtca aatagtgc 558

<210> 53
<211> 600
<212> DNA
<213> Homo sapiens

<400> 53
atctgtttaa gtccttgctt taaattcttt atgggcatta tacccagaag tggaaattgg 60
ctgggatcat atagtaatat gttgaacatt ttgcggaaag gtcaaacttt tccgtagcag 120
ctgtgcccat ttcttaccag taatgcacaa gatctcccat ttctatatat ccttgccaac 180
attattttgt gttttaaaaa atataatagc tattagcagg tatgaagtag ttaaatatac 240
ttctttttat tctcagtgta attctgcttt tctagaatca catctgatga taccaaatgg 300
acaagttaca ggaaaaacct tcatgacaat gaatgtgatt cggtaatctt tatttggggt 360
taatacagca gaaaaaaaag taaggctctg tgttacttcc cagataatct tgaggtcaaa 420
acagatccaa acttccataa attggagacc atttttggc agttaaaaag aaaagaagga 480
aaacaaaagc tcatctctca agcattccag ttataaattg tcccctgatg accctgctac 540
cctgctgggt atcttcataa caaaaacagt gtgactttgg cacttgtgtc acctctctgt 600

<210> 54
<211> 607

<212> DNA
<213> Homo sapiens

<400> 54
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tagcttcttt cgggacctta agtggtggtc tgtaaaagtg cccaaatgaa agcttgtttt 120
gtcggttcac caaaaagggc cttgtcactt tgctgtgcat tttagtccgc cttgtgagtt 180
gtgtcgaaaa gtaaaggtgt tttggcatcc ttttgtttct tggcgagtgt aggacccaac 240
cggtttaggt gttaggggga tctctgtgct gcgggagctt cttgattcct ttcctgtttt 300
atttttttctt ttgcttgttc attggaaaag gtccagtgaa agggactggt gagttggaat 360
tagaagccta cttgtattaa cggcagaatt cgtgttcatt gctaaagatg cagtctcagt 420
aatgactttt ttttttaagg gatacagatg attggtcaag gggaaaaatt aacacgccat 480
acaatgaaga gcaagcagct tcagagtaat tttctgatgg gtgattcttc tagcctgtct 540
cttacagttc caatggcaca tgtgctccct ctttaaggct ggaaactggg atgggaagaa 600
tgatcgg 607

<210> 55
<211> 933
<212> DNA
<213> Homo sapiens

<400> 55
accagctaca ggctatccta gaatactcca caccatcttt aagttcgcat tttaaagtgg 60
aatacggaga atgtgagggt gtttaataaa aaatcatttt tttaaattgg ttatatgttg 120
aagaaatagc ccttagagaa acaactaaaa tcataaagct atttggccta gagaagacta 180
tgaaagggac ttactcaatt tcaacctcag gaagaagaag gtgggagaag atcagtttca 240
aattagatta gaaaagcttt ctaatttttc ttttaaaaaa gctatagaaa atcagatatc 300
cctcactgaa aacttaaaaa atgggtttaa gttgggaatt gctttatgtg tagacagaag 360
acaaaactac acctgggaga gtaaaatcaa acccaaaatc tctgtgtgtc ctgtttatct 420
ggtttgtctc ccttttatct gacaaagaaa gcagggttga gaaggaagag gaagaactgt 480
ccaggacttc aggagcctca cttccttgac aggactctga cagctcaagc cccattgctc 540
actcttgctt cccaggtcta aatgctgcat tgcttggatt ctgggctatt ttgtttcagg 600
gatgttcact ttgcagataa tattgagcac agagacgcac acacacacac acacacacac 660
acacacacac agcacttagt attggatctg gcttataagt gttccataaa tgtcagctgc 720
catgaagcta gtggtgatga ggatgacatt ctgatacttc ttcctggcag tttctagggt 780
ctctgaagac acatgaatgt gtaagatgat tgtgtcacat ggaatgtgta agttggttgg 840
agatggagtc gttccagaat caggcacttt tgttgttgtt ttggctcaaa cctcctacgt 900
gggccctgtc tcactagcgg attgaccatg agt 933

<210> 56
<211> 74
<212> DNA
<213> Homo sapiens

<400> 56
actatacttc acaacaatcc taatcctaat accaactatc tccctaattg aaaacaaaat 60

actcaaatgg gcct 74

<210> 57
<211> 460
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (8)

<400> 57
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ataaggggtg taggtgtgcc ttgtggtaag aagtgggcta gggcattttt aatcttagag 120
cgaaagccta taatcactgc gcccgctcat aaggggatgg ccatggctag gtttatagat 180
agttgggtgg ttggtgtaaa tgagtgaggc aggagtccga ggaggttagt tgtggcaata 240
aaaatgatag ccatacacaa cactaaagga cgaacctgat ctcttatact agtatcctta 300
atcatttgtt ttgagacctc gccgcgacca cgctaagccg aattccagca cactggcggc 360
cgttactagt ggatccgagc tcggtaccaa gcttggcgta atcatggtca tagctgtttc 420
ctgtgtgaaa ttgttatccg ctcacaattc cacacaatag 460

<210> 58
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 58
agggacctga ggctttcttt a 21

<210> 59
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 59
caccacacct tggattcaaa g 21

<210> 60

<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 60
tctcctcccg acaagaagta tct 23

<210> 61
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 61
ggaccaggag cagcaaatc 19

<210> 62
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 62
ctcccatcgc tccagagtg 19

<210> 63
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 63
gaccgaaacc aacagtgatt g 21

<210> 64

<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 64
gtgggggaaa gatgactaaa ata 23

<210> 65
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 65
tccctttgcc gttaccact 19

<210> 66
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 66
agcggtctcc tcctctttct aaa 23

<210> 67
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 67
ctgcctcctg atgcctgat 19

<210> 68

<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 68
tgttgctgag ccaaagattg tat 23

<210> 69
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 69
tgtgccagat acgaatgatg ttac 24

<210> 70
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 70
agcaaaacaa gaggcagaca c 21

<210> 71
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 71
caggacactc tgcccttgat a 21

<210> 72

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 72
cagcctgcta ccacagaact ct 22

<210> 73
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 73
ccgtgcctga tcttttgata agt 23

<210> 74
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 74
ctgtgcccat ttcttaccag taa 23

<210> 75
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 75
gagccttact ttttttttctg ctgta 25